



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.in.gov/idem

**May 23, 2003**

RE: **E.R. CARPENTER 037-17245-00080**  
TO: Interested Parties / Applicant

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## **Notice of Decision: Registration**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4 (d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.



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[www.state.in.us/idem](http://www.state.in.us/idem)

Mr. Wade Baker  
Carpenter Company  
P.O. Box 190  
Russellville, KY 42276-0190

**May 23, 2003**

Re: Registered Operation Status,  
037-17245-00080

Dear Mr. Baker:

The application from Carpenter Company, received on February 19, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following flexible polyurethane foam fabrication plant, to be located at 130 Scenic Hills Industrial Drive, Ferdinand, Indiana 47532 is classified as registered:

One (1) adhesive application line with a maximum usage rate of 5.0 pounds of adhesive per hour, using high volume low pressure (HVLP) spray guns.

The following conditions shall be applicable:

- (a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (b) Pursuant to 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes),
  - (1) Particulate from the adhesive application line shall be controlled by a dry particulate filter waterwash or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
  - (2) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
    - (A) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

- (B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (3) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

Pursuant to 326 IAC 6-3-2(d), the dry filters, waterwash or an equivalent control device shall be in operation at all times the adhesive application line is in operation, in order to comply with this limit.

- (c) Any change or modification which increases the potential emission of VOC equal to or greater than twenty-five (25) tons per year will be subject to 326 IAC 8-1-6 and must receive prior approval from IDEM, OAQ.

This registration is the third air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Branch  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanobar Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,  
**Original signed by**  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

ERG/SD

cc: File - Dubois County  
Dubois County Health Department  
Air Compliance - Gene Kelso  
Southwest Regional Office  
Permit Tracking - Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Branch - Karen Nowak

## Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	<b>Carpenter Company</b>
<b>Address:</b>	<b>130 Scenic Hills Industrial Drive</b>
<b>City:</b>	<b>Ferdinand, Indiana 47532</b>
<b>Authorized individual:</b>	<b>John J. Guthrie, III</b>
<b>Phone #:</b>	<b>(270) 726-9513</b>
<b>Registration #:</b>	<b>037-17245-00080</b>

I hereby certify that Carpenter Company is still in operation and is in compliance with the requirements of Registration 037-17245-00080.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**May 23, 2003**

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a Registration**

**Source Background and Description**

Source Name: Carpenter Company  
Source Location: 130 Scenic Hills Industrial Drive, Ferdinand, Indiana 47532  
County: Dubois  
SIC Code: 3086  
Operation Permit No.: 037-17245-00080  
Permit Reviewer: ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from Carpenter Company relating to the operation of flexible polyurethane foam fabrication plant.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

One (1) adhesive application line with a maximum usage rate of 5.0 pounds of adhesive per hour, using high volume low pressure (HVLP) spray guns.

*Note: This source receives polyurethane foam from an outside source. The only emissions are from the application of adhesives.*

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

**New Emission Units and Pollution Control Equipment Receiving Prior Approval**

There are no new construction activities included in this permit.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP037-3395-00080, issued on May 13, 1994
- (b) Exemption 037-12185-00080, issued on September 19, 2000.

*Note: In September 1997, the source changed the adhesive to a water based adhesive with no emissions, therefore a permit change was not required. In 2000, the source changed back to a solvent based adhesive and was issued an exemption letter by IDEM, OAQ.*

## Enforcement Issue

There are no enforcement actions pending.

## Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on February 19, 2003.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (Pages 1 and 2).

## Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	2.67
PM-10	2.67
SO <sub>2</sub>	0.00
VOC	14.80
CO	0.00
NO <sub>x</sub>	0.00

There are no HAP emissions generated at this source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.
- (d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (e) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### County Attainment Status

The source is located in Dubois County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Dubois County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Dubois County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

### Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.67
PM10	2.67
SO <sub>2</sub>	0.00
VOC	14.80
CO	0.00
NO <sub>x</sub>	0.00

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on potential to emit calculations as shown in Appendix A.

## **Part 70 Permit Determination**

### **326 IAC 2-7 (Part 70 Permit Program)**

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on the revised potential to emit calculations (See Appendix A).

## **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63 Subpart III-National Emission Standards for Flexible Polyurethane Foam Production because the source does not manufacture polyurethane foam on-site.

## **State Rule Applicability - Entire Source**

### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs))**

This source was constructed prior to the July 27, 1997 applicability date for this rule. Therefore, the source is not subject to the provisions of 326 IAC 2-4.1.

### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD))**

This source was a minor source when it was built in 1994 and is not in one (1) of the twenty-eight (28) listed source categories. The potential to emit each criteria pollutant from the entire source is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

### **326 IAC 2-6 (Emission Reporting)**

This source is located in Dubois County and the potential to emit VOC is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

### **326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.



### **State Rule Applicability - Adhesive Application Line**

#### **326 IAC 8-1-6 (New Facilities-General Reduction Requirement)**

Although constructed after January 1, 1980 the adhesive application line does not have a potential to emit VOC equal to or greater than twenty-five (25) tons per year. Therefore, this source is not subject to the provisions of 326 IAC 8-1-6. Any change or modification which increases the potential emissions of VOC to equal to or greater than twenty-five (25) tons per year must receive prior approval from IDEM, OAQ.

#### **326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

The adhesive application line is subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this facility uses more than five (5) gallons of coating per day.

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

- (a) Particulate from the adhesive application line shall be controlled by a dry particulate filter waterwash or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

Pursuant to 326 IAC 6-3-2(d), the dry filters, waterwash or an equivalent control device shall be in operation at all times the adhesive application line is in operation, in order to comply with this limit.

OAQ has determined for these adhesive application operations that the application method, in this case HVLP, shall be considered an equivalent control device.

### **Conclusion**

The operation of this flexible polyurethane foam fabrication plant shall be subject to the conditions of the attached proposed Registration 037-17245-00080.

**Appendix A: Emissions Calculations**  
**VOC and PM/PM10 Emissions From Adhesive Application Operation**

**Company Name:** Carpenter Company  
**Address:** 130 Scenic Hills Industrial Drive, Ferdinand, IN 47532  
**Registration:** 037-17245-00080  
**Plt ID:** 037-00080  
**Reviewer:** ERG/SD  
**Date:** April 01, 2003

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non- Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	*PTE PM/PM10 (ton/yr)	**Transfer Efficiency
Acetone/Heptane Blend	8.00	66.00%	0.0%	66.0%	0.0%	40.00%	0.640	1	5.28	5.28	3.38	81.04	14.79	2.67	65%
<b>Total State Potential Emissions</b>											<b>3.4</b>	<b>81</b>	<b>14.8</b>	<b>2.67</b>	

\* Assume all PM emissions are equal to PM10

\*\* Coating applied using HVLP guns

Note: There are no HAP contained in the adhesive material

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

**Appendix A: Emissions Calculations  
Summary**

**Company Name:** Carpenter Company

**Address:** 130 Scenic Hills Industrial Drive, Ferdinand, IN 47532

**Registration:** 037-17245-00080

**Plt ID:** 037-00080

**Reviewer:** ERG/SD

**Date:** April 01, 2003

**POTENTIAL TO EMIT IN TONS PER YEAR**

	<b>PM</b>	<b>PM10</b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>CO</b>
Adhesive Application Line	2.67	2.67	0	0	14.8	0
<b>SUM</b>	2.7	2.7			14.8	